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**The Society Extends
the Season's
Best Wishes to
Its
Members
and
Friends**



★ ★ ★
THE ILLINOIS ENGINEER, DECEMBER, 1953—VOLUME XXIX, NO. 12

Address all communications to the Society at 631 East Green St., Champaign, Illinois.
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Of Professional Interest

THE ILLINOIS ENGINEER—THIS MONTH

PRESIDENT'S MESSAGE

The Christmas Story

Second Luke: 4-14
(King James Version)

And Joseph also went up from Galilee, out of the city of Nazareth, into Judaea, unto the city of David, which is called Bethlehem, (because he was of the house and lineage of David). To be taxed with Mary his espoused wife, being great with child. And so it was, that, while they were there, the days were accomplished that she should be delivered. And she brought forth her first born son, and wrapped him in swaddling clothes, and laid him in a manger; because there was no room for them in the inn. And there were in the same country shepherds abiding in the field, keeping watch over their flock by night. And, lo, the angel of the Lord came upon them, and the glory of the Lord shone round about them: and they were sore afraid. And the angel said unto them, Fear not: for behold, I bring you good tidings of great joy, which shall be to all people. For unto you is born this day, in the city of David, a Savior, which is Christ the Lord. And this shall be a sign unto you: Ye shall find the babe wrapped in swaddling clothes, lying in a manger. And suddenly there was with the angel a multitude of the heavenly host, praising God, and saying, Glory to God in the highest, and on earth peace, good will toward men.

OPERATION 3 BY 1—MEMBERSHIP DRIVE

Have you done your part?

President Brichler's 3 by 1 membership drive is in full swing. Each Member of the Society is to mail the November, December, and January issues of the ILLINOIS ENGINEER to three prospective members. He is to record the names of the three prospective members to whom he is sending these magazines on a post card for the purpose included with the November issue on page 7, sign his own name, and return to Society Headquarters.

A complete description of the membership drive plan, including a procedure flow chart will be found on pages 4 and 5 of the October issue. If necessary, please refer to this description and start the ball rolling.

W. A. OLIVER, Editor

To Professional Progress, we dedicate and offer you with — SEASON'S GREETINGS — this issue of the ILLINOIS ENGINEER.

Although brief, this message deals with matters of compelling importance to YOU! There are many engineering societies but only ONE National Society of Professional Engineers, of which Illinois Society is an integral part. As defined by Webster, the mathematical definition of ONE is "UNITY." It is, therefore, the "Unity Organization" devoted exclusively to the social, professional, economical, and ethical aspects of engineering. For technical competence, N. S. P. E. urges all its members to be also members of the technical societies of their engineering specialty—but, more than mere technical competence is required of today's Professional Engineers. They must also, in their own best interest, be pioneers in selling America on engineering as a true profession.

The public accepts the fact that those in the Engineering Profession have undergone special training and discipline—but, the true establishment of the recognition of the Professional Engineer by the general public was not realized until the formation of N. S. P. E.

N. S. P. E. members are a dedicated group with definite ideas about advancing the profession and eager to give their time and energies to public service, whenever the chance presents itself. I. S. P. E. and N. S. P. E. have more than a score of hard-working committees which cover the entire range of professional-engineering interests. The groups render a service to the profession, the community, state and nation. Professional concepts are instilled in the younger engineers, with the help of the college faculty members, through talks by eminent Professional Engineers and through literature explaining the profession and the importance of seeking legal registration.

YOU as a PROFESSIONAL ENGINEER have a great stake in translating tremendous achievements of engineering into terms that the average citizen can understand and appreciate. Convinced of the need, and

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READ THE ADVERTISEMENTS

SUBSCRIPTION RATES

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realizing the lack of information about professional engineering, N. S. P. E. is continuously carrying on many-sided public relations programs to tell the world—with special emphasis on employers of Professional Engineers.

We do not think that, after investing the many years required to practice as a Professional Engineer, you will be content to leave the future of YOUR PROFESSION to others. There are certain goals to which all people aspire. It is important to associate ourselves with these goals and the efforts to reach them.

Membership in I. S. P. E. - N. S. P. E. might be cited as PROFESSIONALISM. The FAILURE to join will leave the door open to UNIONIZATION. It is, therefore, a choice of PROFESSIONALISM or UNIONISM. Shall we be indifferent as to whether Engineering is a PROFESSION or a TRADE?

If you, as a Professional Engineer, are concerned with the advancement of your profession, want to know and associate with your fellow Professional Engineers in your city, your state, and all over America, I urge you to join the National and Illinois Societies of Professional Engineers.

RAYMOND G. BRICHLER
President, I.S.P.E.

FROM LEE OSBORNE, NATIONAL DIRECTOR

The following wire was received from Lee Osborne concerning the N.S.P.E. Board Meeting of Nov. 6 and 7 just as we were going to press. We expect to publish a more detailed account of the meeting by Director DeMent in the January issue.

The most recent meeting of the Board of Directors of the National Society of Professional Engineers was held in Indianapolis, Indiana, November 6th and 7th. The usual routine business was transacted and three proposals which the writer regards as of extreme importance to the Society were acted upon. A proposal to construct a building in Washington, D. C., to house N. S. P. E. headquarters carried; a proposal to accept an invitation to join Engineers Joint Council was defeated; and a proposal to support national legislation exempting registered professional engineers from the provisions of future Labor acts was defeated. Two outstanding reports were heard—one regarding E. I. T. and the other in connection with industrial engineers. The writer would be very pleased to attend any chapter meeting at any time to discuss in detail any action, past or future, in which the membership is interested.

LEE OSBORNE,
National Director

It is a deeply disturbing fact that no fewer than seventeen million young folks in our country receive no religious instruction whatsoever. For the future of the nation it is desirable that we leave no measures untried to enroll all our future citizens in the Sunday Schools of America. No person can call himself educated who does not maintain familiarity with the Bible.

—Thomas E. Dewey.

W. L. EVERITT ADDRESSES LAKE COUNTY CHAPTER

Songbird Rosemary Clooney was successfully compressed at a recent meeting of the Lake County Chapter of the Illinois Society of Professional Engineers, with no ill effects.

Dean W. L. Everitt of the College of Engineering at the University of Illinois used Miss Clooney's popular recording of "Come On-a My House" for purposes of demonstrating his spectacular time-compression process. The regular monthly meeting of the Engineers was held at the Swedish Glee Club.

Gives Demonstration

Using charts and a slide projector, as well as a tape recording machine borrowed from radio station WKRS for the occasion, Dean Everitt carefully outlined his complicated time-compression process, and gave demonstrations on the slowing down or speeding up of the human voice without changing its tone.

Dean Everitt showed that the voice can be compressed 15 per cent, or expanded 10 per cent, without any apparent change being noticed. Using both popular and classical records, and also straight sentences, he compressed a voice transcription up to 90 per cent, and then stretched it out again.

Research Value

The idea behind the dean's compressor is the fact that humans can hear three times as fast as they can talk. He said the machine could be used to provide rapid reading coverage for the blind; for research purposes, or for sound tracks for travelogs.

He also said that by compressing or expanding a given speech, the talk can be "tailor made" to fit an exact number of broadcast minutes, without deleting anything from the original speech.

The meeting was Illinois night, with non-member engineering graduates of the University of Illinois appearing as guests of the Society. The meeting was presided over by President Robert Kramer. *Waukegan News-Sun*

EMPLOYMENT OPPORTUNITIES

(a) **Wanted**—City Engineer (Civil, Mechanical, or Electrical), with street experience, \$480-\$575. Also, interested in younger engineer with less experience than necessary to qualify for above position.

(b) **Wanted**—Superintendent of Public Works, \$480-\$575. Working superintendent of street, water and sewer field forces.

Address inquiries to L. M. Lovejoy, City Manager, City of Woodstock, Box 190, Woodstock, Ill.

Men are not to be judged by their looks, habits and appearances; but by the character of their lives and conversations and by their works. It is better to be praised by one's own works than by the words of another.

—L'Estrange

State Committee Work Sparks Chicago Chapter Meetings

L. M. KEOUGHAN, Chicago Chapter, I. S. P. E., Member of the State Committee on Ethics and Practice

We of the Chicago Chapter have occasionally been asked . . . why do each of the Chicago Chapter committees function so well, so easily and so effectively in the discharge of its large portion of committee work for the General Chapter Membership (GCM)? What makes the GCM such willing co-workers with the State committees throughout the year?

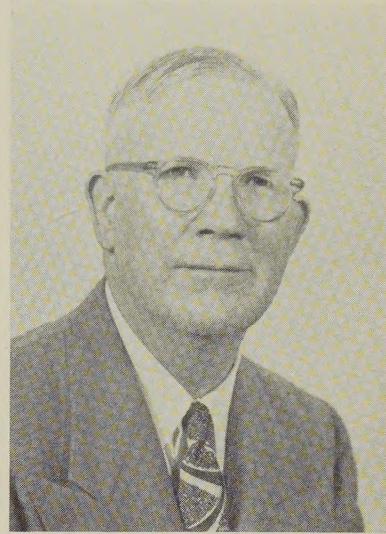
In answer to the latter question, it is probable, that in the relaxed atmosphere of each chapter meeting, the true individualism of each engineer member and his engineering specialty representation in the membership is constructively recognized, drawn upon and directed towards the higher goal and immersion in a truly good professional viewpoint as envisioned by the group of State committees. Each engineer is in understanding camaraderie with the full State membership and ever closely in contact with the various chapter committee groups which tend to show the professional way.

Because of this professional State feeling, most Chicago Chapter members feel it a privilege to participate in the affairs of the chapter and soon develop a desire above their own individual aims to assist the various chapter committees and committeemen. Before long, the newer uncertain and shy members are working hard in a joint effort and interest, one for the other with the old line chapter members, to pass along the inspiration of the State policies and aims.

In answer to the first question, it is probably because our Chicago Chapter Committees (CCC) are composed of a representative cross section of the various engineering sciences as derived from the several important divisions of the engineering economy with a consideration for experience and age as two of the balancing factors. This means that the disposition of a membership matter by a CCC for the GCM involving either State or Chapter business receives the best balanced "committee population" per cent in the GCM universe.

Within each CCC there is a member-to-member recognition of the established reputations of the committeemen and a friendly tolerance of those not so well established and of those less skilled in carrying out the aims of the State or Chapter committees. All reports from the State committees to the CCC are carefully considered by each chapter committee in session prior to its report therefor to the GCM. When these reports are made to the GCM by each committee at the regular chapter meetings, the discussions that take place are constructive, illuminating, and stimulating.

This coalescence of CCC and GCM is maintained by the astuteness of our able chapter officers who lead the way for the CCC and GCM to full understanding of the requirements of the State policies and aims.



L. M. KEOUGHAN

We in the Chicago Chapter have always sought the guidance of the various State Committees for our direct inspiration. We say . . . let there be more State Committee meetings and business . . . in order that we, in the Chicago Chapter, may assist in the furtherance of the aims of the State Society as a whole.

ANNUAL CONVENTION—FIRST REMINDER

Plan now to attend your I. S. P. E. State Convention in East St. Louis March 25-26-27, 1954.

St. Clair Chapter, host for the convention, is rapidly completing plans for a complete program and big time for all who attend. Practically the entire membership of St. Clair Chapter and Ladies Auxiliary are working on committees to make the convention a success. Headquarters will be at the Broadview Hotel in East St. Louis, Ill., only a few minutes ride from downtown St. Louis. Mr. Stephen Casteel is chairman of the convention committee.

RALPH R. HODGES
Publicity Chairman

L. K. CRAWFORD SPEAKS IN DECATUR

L. K. Crawford, member N. S. P. E. and Capital Chapter, spoke before the Central Illinois Chapter on November 19 last, on the subject, "Weaknesses of the Illinois Professional Registration Law and Difficulties of Getting Enforcement." Mr. Crawford is chairman of the state Ethics and Practice Committee and, consequently, is able to speak with authority on his subject.

Never contract friendship with a man that is not better than thyself.
—Confucius.

Champaign County Chapter Charter Night



LADIES AUXILIARY, UNIT NO. 3, RECEIVES CHARTER

The above photograph shows the principals in the recent ladies auxiliary charter night ceremony held in Urbana. From left to right: President R. G. Brichler, Mrs. G. E. Ekblaw, Mr. Manual Garcia, Chairman, Ladies Auxiliaries Committee, Mrs. M. H. Kinch, Mrs. C. P. Siess, and Mrs. John R. Kearns.

ST. CLAIR CHAPTER HONORS PAST PRESIDENTS

Eleven past presidents of the Illinois Society of Professional Engineers, St. Clair Chapter, were honored at a dinner recently.

Melvin Dobbs, sanitary engineer for the East Side Health District, served as chairman of the meeting. Forty-four persons attended the affair held in the Elks Club at Belleville.

The St. Clair Chapter was organized in 1929. It was the first chapter of the Society formed in Illinois and was originally known as the St. Clair-Madison Chapter.

Twenty of the chapter's 24 presidents are living. Arthur J. Fieckert of Belleville, an engineer for the Illinois Division of Highways, is the present president.

Past presidents who attended the meeting Thursday were:

B. C. McCurdy of Belleville, former county highway superintendent, the chapter's second president; Raymond G. Brichler of Belleville, assistant chief engineer for the Alton & Southern Railroad and now president of the Society; F. J. Meek of East St. Louis, plant engineer for the American Zinc Co. at Fairmont City; Lawrence J. Keenan of Belleville, plant engineer for Socony-

Vacuum at East St. Louis; F. G. Olbrich of East St. Louis, a state highway department engineer; J. P. Dufore of Trenton, a state highway department engineer; Sam N. Daniels of Belleville, an engineer for the county highway department; A. Yorker Wade of Belleville, a consulting engineer; Charles F. Manion, Jr. of Belleville, assistant superintendent of the county highway department; H. H. Hall, East St. Louis contractor; Fred Moore of Belleville, an engineer for the state highway department.

Past presidents who were unable to attend were S. C. Casteel of Belleville, manager of the East St. Louis & Interurban Water Co.; I. D. Marsh, personnel manager of the Aluminum Co. of America's East St. Louis plant; J. E. Weinell of East St. Louis, a former county surveyor now operating a surveying and consulting engineering firm.

V. C. Crawley of Belleville, an engineer with the state highway department; W. J. Nuebling of East St. Louis, chief engineer for the Alton & Southern Railroad; J. E. Parham, a Belleville contractor; Harold C. Rothe, formerly of East St. Louis, now an engineer for Socony-Vacuum in England; Charles M. Slaymaker, a former East St. Louisan now retired and living in Bradenton, Fla.

East St. Louis Journal

Compensation For Engineers

By BONNELL H. ALLEN, Manager, Chicago Office
Engineering Societies Personnel Service, Inc.

It is important to remember that every company and every pay scale plan has to be developed to fit that particular case. Accordingly, all pay grades will not necessarily be the same in all companies. However, there will be some similarity in most instances and the various grades can be classified to some extent in a general way. GRADE I is usually set up for the beginning part time worker, the handicapped full time beginner, and others who are not able for one reason or another to perform the duties of the usual beginner. Grade II is usually the level that the beginning shop worker, clerical workers, or other high school beginners would normally start at. It is also used as the starting point for those who may have a little more experience, but who can not completely satisfy the requirements for Grade III. Grade III should cover the semi-skilled shop worker, experienced clerical workers, those with some college background without degrees, non-accredited degree beginners, and other sub-professional workers.

Professional Workers

With this type of a plan, the beginning professional worker with a B.S. degree will normally start at Grade IV as well as skilled workers, high level clerical help, and others with comparable training, experience or backgrounds. By this time, the employee who has worked himself up to a point equal in usefulness, will also be found in this grade. Grade V will usually have beginners with M.S. degrees, skilled specialists in the shop, lower level supervisory personnel, semi-executive and administrative people, and those with comparable responsibility.

Grade VI

Grade VI would be the usual starting point for those with Ph.D. degrees, department heads, managers, and minor executives and will also have those who have worked up to these levels of responsibility and experience. Grade VII will normally have workers who are experienced such as major department heads, executives and others in responsible positions supervising those in lower levels. Grade VIII in some companies will begin to touch the top level employees such as high level administrative and executive personnel and highly experienced specialists.

Top Level Grades

Grade IX and in some companies higher grades will usually have top executives, minor officers, consultants, and others of equal importance for the overall operation of the company. If the grades are carried high enough, each of the officers will fit into certain levels and responsibilities until the top grade is reached which will be the president of the company or the actual last word in over-

all responsibility, not counting the Board of Directors or any overhead committees the company may have. Of course, the actual point where top responsibility begins will depend a great deal on the size and organizational structure of the company itself and it is possible in some types of organization that a person in Grade VII or VIII will be the president and that the company may not have room nor be able to afford many salaries over a certain salary bracket. There is a definite ceiling in every company as to how high the top salaries can go. In many instances, this ceiling is overcome to some extent by the payment of extras such as profit sharing, bonuses, stock payments, and other means of compensation other than actual salary.

Importance of Pay Scale Formulation

This article has gone into the philosophy of how and why pay scales are developed as they are because it is extremely important that anyone trying to determine going rates for himself or for employees understands to some extent the mechanics or fundamentals found in developing such a rate. Again we say, there are no cut and dried rules to follow and each case has to be studied on its own merits.

A Current Usable Pay Scale

Below is given a possible pay scale which can be currently used and which will come close to going rates. This scale does not allow for any differentials caused by cost of living in one town over another, which incidentally can be debated from now until the end of time; by industry wide or community agreements; or other outside factors which sometimes have a bearing on the scale decided for use. In other words, it is a guide to go by and any adjustments to fit your particular case should be made before adopting it for your own use.

(The Scale is printed on page 8)

Customary Adjustments

It is fairly common practice that when an employee is changed from an hourly rate to a weekly, monthly, or yearly rate or if a person is originally hired on a weekly, monthly or annual rate to round the figures out and do away with the odd cents. Hence, we find that today recent graduates with a B.S. degree are getting \$325.00 a month or thereabouts, or \$3900 a year. Although, from all indications at the time this is being written, the going rate may be closer to \$350 per month by the time this article is published. This seems to be a standard starting figure for recent graduates all over the country.

Plotting a Curve

If the above scale is plotted on a curve basis, it will be found that the curve has a tendency to flatten out the

(Continued on page 8)

To The Prospective Member

The purpose of this issue of the ILLINOIS ENGINEER is to bring before prospective members the aims and purposes of the Illinois Society of Professional Engineers and of the National Society of Professional Engineers of which it is an affiliate. The following series of articles has been prepared by a partial list of officers and committee chairmen of the Illinois Society to explain the function of their particular activity. Note that these statements tell a purpose only, without any reference to accomplishment. Let it be understood at this point that the Society is proud of its accomplishments which have increased at an accelerated rate during the years.

But in order to speak with a stronger voice for the engineering profession which is its prime purpose, the Society needs a larger membership. That is the reason this issue of the Society's magazine has been placed in your hands. That is the reason that your attention is directed to the fold-in application for membership on the facing page and that your consideration of such membership is respectfully requested.

W. A. OLIVER, Editor

PLEASE NOTE:

After the prospective member has read this copy of the *Illinois Engineer*, it is requested that he pass it on to an engineer friend who may be interested in membership in I. S. P. E.

MR. ENGINEER-IN-TRAINING

E. W. MARKWARDT, Chairman, Membership Committee

The Illinois Society of Professional Engineers as a section of the N. S. P. E. extends to you an invitation to join them. They are concerned with the engineer in regard to men, materials and money. A great deal of the fascination of our profession comes from the new problems that are continually coming our way, and which require us to keep all these factors in their proper perspective and balance. You can help us and yourself by joining us in working out these problems and keeping them in the proper perspective and balance. It will give you confidence in your everyday work and association with other engineers.

The purely professional society such as the N. S. P. E. is concerned with the economical and social welfare of the country and the individual engineer, with the opportunity to express himself and his ideas and to make his contribution to the profession. In making his contribution, the young engineer is expanding his horizon and stature among professional men. A young engineer may think that all things have been done and cannot see what the future holds, but the future is bigger than all of us and opportunity for the young engineer is brighter than ever before. The problems to be solved are getting no easier, so the challenge to the engineer becomes greater all the time. That is where association with the older professional engineer comes in handy.

The N. S. P. E. is most fittingly qualified by past performance to advance the objectives of the profession, whether these objectives be salaries, public recognition, public education or a watch dog over legislation pertaining to the engineer or public welfare in regard to engineering. It is already a Society of standing and membership, but to build for the future we must look to you, the "Engineers-in-Training."

Give us your support by asking a NSPE acquaintance of yours to take you to a meeting, better still take the

membership application attached to the front of this month's ILLINOIS ENGINEER, fill it out, attach a check for ten dollars and send it in. Simple, isn't it?

I. S. P. E. LADIES' AUXILIARIES

MANUEL GARCIA, Chairman

Three chapters in the Illinois Society of Professional Engineers have formed ladies' auxiliaries, each auxiliary proving a success in its initial organization. During 1952, the ladies of the Central Illinois Chapter pioneered the movement and were followed by the St. Clair Chapter, which held its charter night meeting on May 9, 1953. The third unit to organize was the Champaign County Auxiliary, which was presented its charter on the night of October 1, 1953.

The purpose of the formation of these auxiliaries can best be shown by stating their objectives:

1. To promote public interest in I. S. P. E. and N. S. P. E.
2. To cultivate fraternal feeling and co-operation among families of I. S. P. E.
3. To interest new members in I. S. P. E.
4. To promote unity within the profession of engineering.
5. To promote entertainment in the chapter and in the Society.

Results are already being obtained.

Publicity initiated by the ladies in organizing, and activities of the auxiliaries, are appearing in local newspapers. Membership drives for auxiliary members have activated interest in male members and in obtaining new members for I. S. P. E.

These activities of the ladies' auxiliary are but a few in promoting interest in the Illinois Society of Professional Engineers. Three units are organized out of a potential 16—"WHO'S NEXT?"

CONSTITUTIONAL AMENDMENT COMMITTEE

H. E. BABBITT, Chairman

The duties of the Constitutional Amendment Committee are clearly stated in the constitution of the Society, as follows:

YOUR PART (AS MEMBER OF I. S. P. E.) IN THE MEMBERSHIP DRIVE

1. If you have not already done so, fill out the card which was included in the November issue (also this issue) with the three names to whom the November, the December, and January ILLINOIS ENGINEER are to be sent, and drop it in the mail.
2. Paste a label containing your prospect's name and address over your name and address on the front cover.
3. Put on a three-cent stamp and drop the magazine in the mail.

NOTE: If you are saving a file of copies of the ILLINOIS ENGINEER, send request to the Executive Secretary's office and each of your three copies will be replaced. The important thing is to get this copy into the hands of a prospective member without delay. Thanks for your help.

"... To prepare the wording of amendments to the constitution and call attention to conflicts with other parts of the Constitution resulting from proposed amendments referred to the Committee by the Board of Direction. This is not a "policy" committee, and its duties do not include recommendations concerning matters of policy."

It is evident from the statement that this committee acts only when alerted to do so by the Board of Direction. In fact, the statement in the last sentence quoted above might intimate that previous constitutional amendment committees may have overstepped their duties. Two matters were referred to the committee by the Board at the last Annual Meeting. These were cleared up by vote of the Society this spring and summer. At the present time there is nothing in the hands of this committee that has been referred to it by the Board. History would indicate, however, that this situation will not long endure, for tinkering with the constitution is an indoor sport on the part of many interested members.

If you have an amendment to the constitution to propose, send it to the Board of Direction. This committee will expect to handle it, and will be ready to do so, when the Board of Direction refers it to us.

ACTIVITIES OF I. S. P. E. PUBLIC INTERESTS COMMITTEE

WILLIAM A. HASFURTHER, Chairman

An organization that has as its sole purpose means for benefiting only its own members either materially or educationally is not fulfilling all requirements of our earthly existence. Most theologies teach that as individuals we should strive to assist others, and it follows that as a Professional Society of progressive persons we should encourage service to our community and country. The functions of the Committee on Public Interests are to select and recommend to the Society ways in which

we as a group, by nature of our training and experience, can serve the public in the scope of civic affairs, and also ways in which we may promote interest in good engineering.

Engineers have long been criticized for not taking a more active part in public affairs and for exerting so little influence in society other than that for which they get paid. We should not have to be urged to participate in things other than those which concern our business routine or immediate family life but since we are so often totally wrapped up in personal affairs it becomes the duty of our professional and technical organization to guide some of our efforts into other worthwhile channels.

The Committee on Public Interests has been selecting subjects covering community and society activities in which engineers and our Society should be interested and has recommended to the Board of Direction means for enlisting participation by the chapters. However, regardless of what course of action the Committee or Board of Direction recommends to the chapters, the promotion of good engineering and the increased service of engineers to their communities can only come about through a wholesome interest of members in their profession, society and country.

ETHICS AND PRACTICE COMMITTEE

L. K. CRAWFORD, Chairman

All professions are expected to maintain high standards of practice. The public expects the professions to protect it against sharp practices.

Since N. S. P. E. and its member state organizations are the only groups organized to speak effectively for the profession as a whole, it follows that the responsibility for maintaining high standards falls upon its members.

The Ethics and Practice Committee is the "watch dog" of the Society. This committee is charged with the responsibility of investigating and reporting upon violations in two general classifications:

1. Violations of the "Canons of Ethics for Engineers" by members.
2. Unethical Practice by non-engineers.

As in other functions of N. S. P. E., matters concerning Ethics and Practice are handled on 3 levels: the Chapter, the State level and the National level. The greatest opportunity for helping the profession and the public is for action on the local or Chapter level. It is here that violations by individuals become known. Prompt action by chapter committees to investigate reported violations of ethics or violations of the laws governing engineering can, in the great majority of cases, cause an unethical or illegal practice to be stopped and at the same time bring credit and respect to the profession.

If a doubtful practice on the part of a member is reported to a chapter, the usual procedure is to refer the

matter to the Ethics and Practice Committee. The committee must then investigate the incident and customarily calls on all concerned to come before the committee, individually, behind closed doors so that a frank discussion can be held informally. Usually, if a member is shown the error of his ways, he will agree to correct any wrong and to desist from any practice which may be questionable.

When violations by non-members are reported, the committee will usually request those reporting the case to present clear-cut evidence. If the investigation appears to clearly indicate a case of malpractice the committee may send a warning letter to the individual con-

cerned, pointing out that on the basis of best information available, he is breaking the law. If a warning does not bring results, it may be necessary for the State Committee to request action by State authorities.

Undoubtedly, the medical profession has attained its present high level of respect and dignity largely through its efforts to outlaw the "quack." The Bar Association has also gained recognition by clamping down on "shysters." The Engineering Profession can also gain public recognition if it is active in policing its own profession.

Prompt, decisive action is necessary and, with it, publicity so that the general public is aware of the fact that it is being protected against acts of malpractice.

COMPENSATION FOR ENGINEERS

(Continued from page 5)

The Scale

	<i>Minimum Starting Rate</i>	<i>Maximum Rate</i>
Grade I	\$ 0.75 30.00 130.00 1,560.00	\$ 1.18 per hour 47.20 per week 204.53 per month 2,454.40 per year
Grade II	\$ 1.08 43.20 187.20 2,246.40	\$ 2.25 per hour 68.00 per week 294.66 per month 3,536.00 per year
Grade III	\$ 1.41 56.40 244.40 2,932.80	\$ 2.25 per hour 90.00 per week 390.00 per month 4,680.00 per year
Grade IV	\$ 1.87 74.80 324.13 3,889.60	\$ 2.98 per hour 119.20 per week 516.53 per month 6,198.40 per year
Grade V	\$ 2.25 90.00 390.00 4,680.00	\$ 3.59 per hour 143.60 per week 622.26 per month 7,467.20 per year
Grade VI	\$ 2.71 108.40 469.73 5,636.80	\$ 4.33 per hour 173.20 per week 750.53 per month 9,006.40 per year
Grade VII	\$ 2.98 119.20 516.53 6,198.40	\$ 4.76 per hour 190.40 per week 841.73 per month 9,900.80 per year
Grade VIII	\$ 3.27 130.80 566.80 6,801.60	\$ 5.23 per hour 209.20 per week 906.53 per month 10,878.40 per year

(Continued from page 5)

higher you go. This is as it should be in developing any type of pay scale because people, like water, have a tendency to level off at the peak of their usefulness to a company.

Individual Ability

After the first year, or starting point, there is no set rule as to where a person should fit into any pay scale. A great deal depends on his own ability and capability. Some people are worthy of being upgraded one grade, others might be upgraded two or three grades, and still others may stay on the same grade and never be worthy of moving into more responsibility or any higher salary bracket than the grade he is in will permit.

Extra Information

Should you as an employer or as an individual need further explanation of this pay scale as developed, most any of the E.S.P.S. offices are in a position to give you general guidance without being too specific as it is necessary to have all of the facts on each case before definite information can be worked out. Remember that in all cases, on the pay scale, there are pay steps between the starting point and the maximum allowable for each grade and those in between steps are sometimes the deciding factors as to what the going rate for a person should actually be.

COST OF LIVING INDEX

The correction factor to be applied to the I. S. P. E. Schedule of Minimum Fees and Salaries was 192.6 for September, 1953. The factor is based upon the U. S. Department of Labor's most recent Consumer Price Index.

Some say kissing is a sin; but if it was na lawful, lawyers would na allow it; if it was na holy, ministers would na do it; if it was na modest, maidens would na take it; if it was na plenty, puir folk would na get it.

—Burns

Good intentions are very mortal and perishable things; like very mellow and choice fruit they are difficult to keep.

—C. Simmons

Industry's Responsibility In Training and Developing Engineers

RONALD B. SMITH, Vice-President, The M. W. Kellogg Company, New York

The ever-broadening scope of engineering activity has wrought major changes in our concept of engineering education. It is now an accepted fact that the knowledge of technical and scientific fundamentals one can absorb in a four-year college program is insufficient. Industry and Education must now bear joint responsibility for the furtherance of the Engineering profession as a whole. The colleges must indoctrinate the Engineer-in-Training with the idea that a professional man's education is never ended; it is up to Industry to provide the additional incentive that makes the concept realistic from the moment the graduate enters the organization.

The greater portion of responsibility in this regard will, of necessity, rest with Industry. The seed planted in a sound foundation by the colleges—the desire to obtain more knowledge and thus attain a higher standing in the profession—must here be nurtured.

Industry has generally adopted indoctrination programs and cadet courses as a means of introducing the graduate into its midst. To quickly create in the cadet's mind a sense of stability, and a genuine feeling of usefulness, the training course should be one of on-the-job doing rather than observing. Although most apprentice programs are formally over within a calendar year, a continuation under another guise for a much longer period is desirable from both the Company and the individual viewpoint. Not only for broad technical training but to develop better human relationships early in his career, continued transfers through the various engineering divisions at six- to twelve-month intervals are advantageous during the first several years of a graduate's employment. In a small industry the additional personal attention and greater opportunity for variety may compensate for lack of such flexibility.

Industry has the power to inspire, guide and assure financial assistance in the development of the professional character of the engineer. The primary step in his "ladder of success" is the establishment of a goal, for the one outstanding difference between the technician and the professional engineer is lack of purpose. It is Industry's responsibility to furnish the inspiration that will eliminate idle drifting, by placing responsibility as early as possible, and by setting before young men recognized goals that are attainable. To overstructure an industrial organization, within the bounds of good efficiency, is beneficial in this regard since it creates many additional "straw boss" positions in which an individual may exercise a degree of authority. Many competent technical groups have failed not only to inspire men but to develop good managers, through the lack of a clearly-defined organizational ladder.

To further encourage this plan, company lectures and

symposia geared to an academic level have been instituted. Such a procedure not only livens but sharpens the technical tools of the whole organization at little expense. When directed by capable company personnel they create confidence and boost morale. If the location is favorable, every effort must be made to encourage out-of-hour study in qualified local institutions. The Metropolitan New York area is particularly fortunate in this regard—in fact so fortunate that many of the disadvantages of living on a small income within a large metropolis are overcome. If funds are available within the organization, a few company scholarships for advanced study should be offered yearly and on a competitive basis to the promising young technical men of the organization.

In the development of professional men, emphasis must be placed on the importance of professional society membership. Every encouragement must be given to active participation in society work and to attendance at meetings. Technical papers should be sponsored and reviewing procedures set to police the quality of the offerings. Once an outstanding technical accomplishment is made, it deserves ethical publicity, and when properly prepared, Management need have no fear that its proprietary position is being jeopardized. Unlike other professional men, engineers are seldom their own bosses. As a result there is not always the same freedom, not even perhaps the incentive for the development of a professional reputation. Industrial management must avoid any conduct which invites the accusation that it is exploiting professional men—and one of the easiest ways is by allowing them freedom to print, particularly within the confines of the reputable technical societies.

There is much that Industry can do in the development of professional men, by adopting a forward position regarding the registration of their personnel. In the practice of any art devoted to public benefit, registration is protection. To those of us actively engaged in the field, it is more; it is recognition. Industry should insist that cadet engineers attain their certificates for Engineer-in-Training. Refresher courses for company personnel qualified for registration should be conducted yearly and at company expense within large organizations. Industry should start now to insist that their senior engineers be registered and should encourage such action by the payment of premium compensation for those who have so qualified.

In a movement toward unity and strength, many large organizations are assenting to the policy that the title "engineer" be reserved solely for one qualified to hold a state license. Before such a time, a man is an "Assistant Engineer" or an "Associate Engineer" in his field

of specialization. After that time he may become a titled engineer such as a "Mechanical Design Engineer," or a "Chemical Process Engineer." The unanimous acceptance of such a policy by Industry would bring with it added emphasis and recognition of the professional status of engineering and the importance of a professional license.

Reprinted from *New York Professional Engineer*

Every good act is charity. Your smiling in your brother's face is charity; an exhortation of your fellow man to virtuous deeds is equal to alms-giving; your putting a wanderer in the right road is charity; your assisting the blind is charity; our removing stones and thorns and other obstructions from the road is charity; your giving water to the thirsty is charity. A man's true wealth hereafter is the good he does in this world to his fellow man. When he dies, people will say, "What property has he left behind him?" But the angels will ask, "What good deeds has he sent before him?"

—Mahomet.

In a great democracy such as ours the outstanding need of the hour is greater information and greater tolerance. Sincere efforts at enlightenment and education by the press are more important than self-appointed leadership.

—Roy W. Howard

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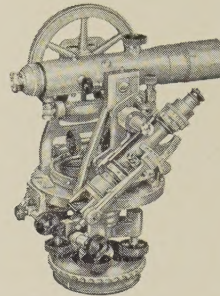
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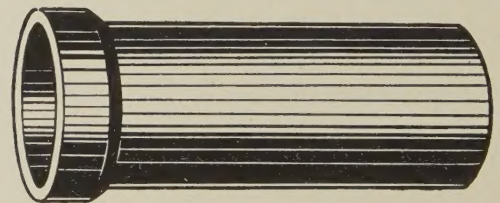
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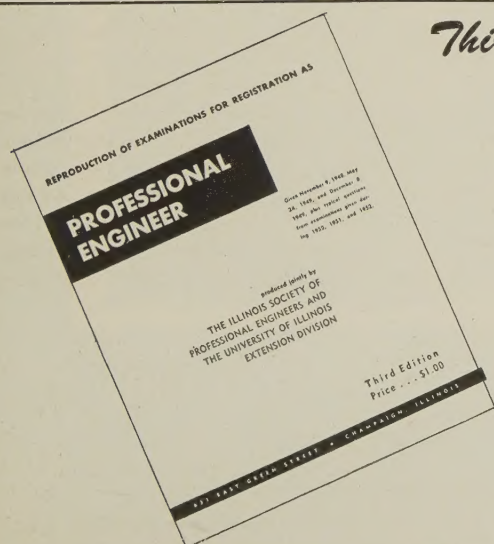
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RECEPTIONIST'S CORNER

During the month of December the offices of Engineering Societies Personnel Service will be in their new quarters on the sixth floor of the Western Society of Engineers building. All visitors will be welcome to come in at any time during the month of December. Our address is still 84 E. Randolph Street, and our own phone number of State 2-2748 will be in effect again.

We wish all of you a very Merry Christmas and the Happiest New Year ever.

J. H.

MEN AVAILABLE

Elec. Tech. 26. One yr. assist on experiments on different types of E. E. research. One yr. adjusted relays and repaired elec. meters. \$4500. Chicago. 747-PE

Field Engr. E.E. and A.E. 31. Four yrs. operate and maintain a local T. V. branch, installed master radio and T. V. systems in hotels and service on T. V. receivers, maintain inventory of stock and replacement parts. \$5500. Chicago. 748-PE

Sales Mgr. 54. Thirty yrs. sales and engineering of heavy metal working equipment, mechanical, electrical and hydraulic equipment. \$15,000. Chicago. 749-PE

Draftsman. European degree M.E. 28. Four and one-half yrs. research and developing engineer on sheet metal and plate cutting machinery. \$5200. Midwest. 750-PE

Industrial Mgmt. Engr. Ind. Eng. 32. Fifteen mos. prepared method studies of foundry operations. Sixteen mos. designed, detailed and layout of equipment required for foundry production. Seventeen mos. estimating on material handling equipment. \$6000. Chicago. 751-PE

Consul. Electr. European degree. 67. Five yrs. planning and installation of a lab. Forty-seven yrs. supervisor of research and development of el. motors, apparatus, controls, and appliances. \$8000. Midwest. 752-PE

Process Production. Chem. 27. Three and one-half yrs. process development for a line of inorganic fluoride chemicals. \$5000. U. S. 753-PE

Ind. Mgmt. Engr. 56. One yr. engineering on furnaces and special welding equipment. Thirty yrs. engineering and line command in military service. \$8000. Midwest. 754-PE

Constr. Supt. 26. Thirty mos. charge of design, layout of sewage treatment and water distribution plants. Two and one-half yrs.

design and application engineer, on pumps and sanitary process equipment. One yr. responsible for operation of hydraulic lab. \$8500. Midwest. 755-PE

Sales Engr. Chem. Engr. 37. Three yrs. charge of production, scheduling, purchasing, and control of finished production. Two yrs. selling domestic and commercial heating plants and equipment. Chicago. \$6000. 756-PE

Constr. Supt. C.E. 40. Eight years engineer planning and design of public works improvements. Three yrs. design and detailing of reinforce concrete and structural steel buildings. \$6000. Midwest. 757-PE

Designer. 69. Four yrs. design and drafting of jigs, fixtures, special machines and electric torch cutting equipment. \$5200. Chicago. 758-PE

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Instructor. Eng. deg. Age: up to 26. Recent graduate or better interested in drafting or design. Duties: teaching technical drawing. Salary: \$400 per month for 9 months. Employer will pay fee. Location: Chicago. C-1401

Sales and Service. Chem. or Chem. Eng. Age: up to 31. 2 plus yrs. exp. in general chemical molding powder or plastics sales. Knowledge of chemical products. Duties: sales to plastics molders and finishes and/or appliance companies. Several territories open. For a manufacturer of finishes. Salary: \$500 to \$650. Travel: home week-ends. Car furnished. Employer will negotiate fee. Location: Open. C-1404(a)

Engineering Supervision. Eng. Deg. Age: 30-50. 5 plus yrs. exp. in electro-magnetic controls in high volume production and preferably 2 yrs. in supervisory capacity. Knowledge manufacturing operations and finishes. Duties: supervise product performance affected by design changes at request of manufacturer of gas appliances. Salary: \$600-\$750 per month. Employer will pay fee. Location: Wisconsin. C-1409

Project Engineer. M.E. or E.E. Age: up to 45. 2 plus yrs. exp. in design or development of controls with inventive and creative flair. Knowledge: of electrical circuitry and make and break switches. Duties: designing and developing new controls and maybe gas control equipment. For a manufacturer of controls. Salary: \$6000 to \$10,000. Employer will pay fee. Loc.: Indiana. C-1443

Engineer and Architect. Sanitary Engr. C.E. Age: 35 and older with responsibility design exper. in sewage treatment, plants of 10 mill. gas. per day capacity. Company will pay fee. Salary range: \$10,000. Location: Midwest. D-8930

Tool Design Engineer. M.E. preferred. Age: open. Familiar with progressive dies required for light stamping and assembly operations. Know: of tube bending desirable. Must have the potential to head up dept. when opportunity permits. Salary: up to \$750 per month. Loc.: Michigan. D-8931

Chief Engineer. Age: 40-55. 3 plus yrs. exp. in hydraulic (oil) pump design of development work. Knowl.: Oil pumps. Duties: supervise design of new pumps and improve old design to combine sales appeal, utility and low mfg. costs; design of tools, gauges and fixture cost estimating; and improve materials and methods. For mfr. of pumps. Salary \$9000 to \$10,000 per year. Employer will pay one-half of fee. Location: Chicago. C-1420

Sales Engineering Service. Age: 40-50. 5 plus yrs. exp. in sales or application work in sanitary, waterworks, and/or gas utilities. Duties: sales promotion and administrative work on engineering service in sanitary, waterworks, etc. field and contacting industrials and municipalities. For a firm of consultants. Salary: \$6000-\$8000 per year. Employer will negotiate fee. Location: Chicago. C-1425

Foreman Trainee. Age: up to 40. Recent graduate or better. At least 1 yr. of college chemistry of physics and mathematics. Knowledge of physical reactions. Duties: training for foreman of coating department. For a manufacturer of optical equipment. Salary: \$80-\$90 per week. Employer will pay fee. Location: Chicago. C-1426

Designer—Elect. Must have degree in electrical engineering and three yrs. experience or eight yrs. exp. with no degree. Exp. shall include design and layout of lighting, power and control systems for commercial and industrial buildings. Employer will pay fee. Salary: open. Location: Chicago. C-1429

Sales—Lighting Equipment. Age: 30-48. 14 yrs. exp. in industrial lighting, layout or sales. Knowledge of lighting equipment. Duties: sales and application of industrial lighting equipment and accessories. For a manufacturer of electrical equipment. Salary: \$6-8000 per yr. Employer might negotiate fee. Some traveling. Car required. Location: Chicago. C-1430